

Applic. No. 09/936,069
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AMENDMENTS TO THE CLAIMS:

Claims 1-31 (Canceled)

Claim 32. (Withdrawn) An auxetic polymer material in which the material is in the form of filaments or fibers.

Claim 33. (Previously Presented) A method of forming an auxetic material comprising the steps of cohering and extruding a heated thermoformable particulate polymer material wherein cohesion and extrusion are effected during spinning to produce filamentary material having auxetic properties, and wherein there is substantially no compaction or sintering of the polymer material prior to spinning of the material.

Claim 34. (Canceled)

Claim 35. (Previously Presented) The method according to claim 33 wherein said method is performed substantially without any separate post-extrusion draw stage.

Claim 36. (Previously Presented) The method according to claim 33 wherein said method is performed at a temperature which is high enough to give rise to cohesion of polymer particles sufficient to permit production of filaments but without causing actual melting and complete coalescence of the particles into a liquid form.

Claim 37. (Previously Presented) The method according to claim 33 wherein said particulate polymer material comprises rough surfaced particles having irregular shape and size.

Claim 38. (Previously Presented) The method according to claim 37 wherein said particles are up to 300µm in diameter.

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Claim 39. (Previously Presented) The method according to claim 33 wherein said step of extruding is performed using melt extrusion apparatus having a barrel zone, an adapter zone and a die zone with an extruder plate, wherein said zones are capable of independent temperature control.

Claim 40. (Previously Presented) The method according to claim 39 wherein said barrel zone comprises a feed sub-zone, a compression sub-zone and a melting sub-zone, each of said sub-zones being capable of independent temperature control.

Claim 41. (Previously Presented) The method according to claim 39 wherein said barrel zone includes an extrusion screw.

Claim 42. (Previously Presented) The method of claim 39 wherein said extruded filaments from said die zone are passed around rollers substantially without drawing traction.

Claim 43. (Currently Amended) An auxetic polymeric material of continuous filamentary or fibrous form produced by a method comprising the steps of cohering and extruding a heated thermoformable particulate polymer material wherein cohesion and extrusion are effected during spinning to produce continuous filamentary material having auxetic properties, and wherein there is substantially no compaction or sintering of the polymer material prior to spinning of the material.

Claim 44. (Previously Presented) The auxetic polymeric material of claim 43 wherein said polymeric material comprises polypropylene.

Claim 45. (Withdrawn) The auxetic polymeric material of claim 43 wherein said polymeric material is formed in the configuration of a fabric.

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Claim 46. (Withdrawn) The auxetic polymeric material of claim 43 wherein said polymeric material is formed in the configuration of reinforcing fibers for use in a fiber-reinforced composite material.

Claim 47. (Withdrawn) The auxetic polymeric material of claim 46 wherein said composite material comprises sound insulation for building walls.

Claim 48. (Withdrawn) The auxetic polymeric material of claim 46 wherein said composite material is formed in the configuration of a vehicle body part.

Claim 49. (Withdrawn) The auxetic polymeric material of claim 48 wherein said vehicle body part comprises a vehicle bumper.

Claim 50. (Withdrawn) The auxetic polymeric material of claim 43 wherein said polymeric material is formed in the configuration of a personal protective device.

Claim 51. (Withdrawn) The auxetic polymeric material of claim 50 wherein said personal protective device comprises a crash helmet.

Claim 52. (Withdrawn) The auxetic polymeric material of claim 50 wherein said personal protective device comprises a projectile resistant article of clothing.

Claim 53. (Withdrawn) The auxetic polymeric material of claim 50 wherein said personal protective device comprises a shin pad.

Claim 54. (Withdrawn) The auxetic polymeric material of claim 50 wherein said personal protective device comprises a knee pad.

Claim 55. (Withdrawn) The auxetic polymeric material of claim 50 wherein said personal protective device comprises a glove.

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Claim 56. (Withdrawn) The auxetic polymeric material of claim 43 wherein said polymeric material is formed in the configuration of a filter.

Claim 57. (Withdrawn) The auxetic polymeric material of claim 43 wherein said polymeric material is formed in the configuration of a twisted fiber rope.

Claim 58. (Withdrawn) The auxetic polymeric material of claim 57 wherein said twisted fiber ropes are configured in the form of a net.

Claim 59. (Withdrawn) The auxetic polymeric material of claim 43 wherein said polymeric material is formed in the configuration of a biomaterial.

Claim 60. (Withdrawn) The auxetic polymeric material of claim 43 wherein said polymeric material is formed in the configuration of a bandage or pressure dressing.

Claim 61. (Withdrawn) The auxetic polymeric material of claim 43 wherein said polymeric material is formed in the configuration of a seal or gasket.

Claim 62. (Withdrawn) The auxetic polymeric material of claim 43 further comprising an entrapped, releasable substance in the pores thereof.

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